

## IN THE CLAIMS

Please replace the claims as filed with the claims set forth below. This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A freestanding rod-shaped particle comprising 2 to 50 segments, wherein the particle has a generally circular cross-section along its length, wherein the segment transitions are generally perpendicular to said length, wherein the particle length is from 20 nm to 50  $\mu\text{m}$  and the particle width is from 5 nm to 50  $\mu\text{m}$ , and

wherein at least one segment is comprised of a metal selected from the group consisting of: silver, gold, copper, nickel, palladium, platinum, cobalt, rhodium and iridium, and wherein the particle contains informational content based on the composition of the particle.

2. (Original) The particle of claim 1, wherein the particle length is from 500 nm - 30  $\mu\text{m}$ .

3. (Original) The particle of claim 1, wherein the particle length is from 1 - 15  $\mu\text{m}$ .

4. (Original) The particle of claim 1, wherein the particle width is from 10 nm - 2  $\mu\text{m}$ .

5. (Original) The particle of claim 1, wherein the particle width is from 30 nm to 500 nm.

6. Cancelled.

7. (Original) The particle of claim 1, comprised of 2 - 10 different types of segments.

8. (Original) The particle of claim 1, wherein the lengths of said segments is from 1 nm to 50  $\mu\text{m}$ .

9. (Previously presented) The particle of claim 1, wherein the lengths of at least one of said segments is from 50 nm to 15  $\mu\text{m}$ .

10. (Previously presented) The particle of claim 1, wherein the particle length is from 1 - 15  $\mu\text{m}$ , the particle width is from 30 nm to 2  $\mu\text{m}$ , and the lengths of at least one of said segments are from 50 nm to 15  $\mu\text{m}$ .

11-14. Cancelled.

15. (Previously presented) A freestanding particle comprising 2 to 50 segments, wherein the particle length is from 20 nm to 50  $\mu\text{m}$ , and the particle width is from 5 nm to 50  $\mu\text{m}$ , and wherein at least one of said segments is comprised of a superparamagnetic compound.

16-86. Cancelled.

87. (Previously presented) The particle of claim 1, wherein the particle length is from 1 - 15  $\mu\text{m}$ , the particle width is from 2  $\mu\text{m}$  to 50  $\mu\text{m}$ , and the lengths of said segments are from 50 nm to 15  $\mu\text{m}$ .

88. (Currently amended) A freestanding segmented rod-shaped particle manufactured by the deposition of a plurality of materials inside a template, comprising the method:

- a) causing deposition of a first material into a pore of said template;
- b) causing deposition of a second material into said pore of said template, wherein the deposition of at least one of said first material and said second material is electrochemical deposition; and
- c) releasing said segmented particle from said template to provide a freestanding segmented particle having a length from 10 nm to 50  $\mu\text{m}$  and a width from 5 nm to 50  $\mu\text{m}$ , wherein said particle has a generally circular cross-section along its length, wherein the segment transitions are generally perpendicular to said length, and wherein the particle comprises 50 or

fewer segments, and wherein at least one of said segments has a length of at least 10 nm, and wherein the particle contains informational content based on the composition of the particle.

89. (Previously presented) The particle of claim 88, wherein the particle length is from 500 nm - 30  $\mu$ m.

90. (Previously presented) The particle of claim 88, wherein the particle length is from 1 - 15  $\mu$ m.

91. (Previously presented) The particle of claim 88, wherein the particle width is from 10 nm - 2  $\mu$ m.

92. (Previously presented) The particle of claim 88, wherein the particle width is from 30 nm to 500 nm.

93. (Previously presented) The particle of claim 88, comprised of 2 - 10 different types of segments.

94. (Previously presented) The particle of claim 88, wherein the lengths of said segments is from 1 nm to 50  $\mu$ m.

95. (Previously presented) The particle of claim 88, wherein the lengths of at least one of said segments is from 50 nm to 15  $\mu$ m.

96. (Previously presented) The particle of claim 88, wherein the particle length is from 1 - 15  $\mu$ m, the particle width is from 30 nm to 2  $\mu$ m, and the lengths of at least one of said segments are from 50 nm to 15  $\mu$ m.

97. (New) A freestanding rod-shaped particle comprising 2 to 50 segments, wherein the particle has a generally circular cross-section along its length, wherein the segment transitions are generally perpendicular to said length, wherein the particle length is from 20 nm

to 50  $\mu\text{m}$  and the particle width is from 5 nm to 50  $\mu\text{m}$ ,

wherein at least one segment is comprised of a metal selected from the group consisting of: silver, gold, copper, nickel, palladium, platinum, cobalt, rhodium and iridium; and

wherein the particle can function as an electronic device or as part of an electronic device.

98. (New) The particle of claim 97 wherein said electronic device or part of an electronic device is selected from the group consisting of a conductor, or diode, a transistor, a wire, a capacitor, a resistor, a negative differential resistance device, a resonant tunneling diode, a ferroelectric switch, a shift register and a delay line.